

Remarks/Arguments

Amendments to the claims: The claims have been amended to remove the limitation of sidewall reaction in the interests of clarity because that the diazonium specie is capable of reaction at both the sidewalls and the carbon nanotube ends. This is supported by the claims as originally filed.

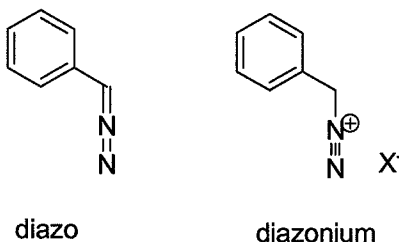
I. Applicants responds to Examiner's 35 U.S.C. § 103(a) rejections of Claims 36-68, 88-93, and 130 by amendment and traversal

The Examiner holds that Claims 36-68, 88-93, and 130 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Ruoff, *et al.* (U.S. Patent 5,547,748) (hereinafter "*Ruoff*"). Applicants respectfully traverse the rejections.

Applicants disclose a product by process and compositions in which carbon nanotubes are derivatized by a diazonium specie.

The Examiner states that Ruoff teaches nanomaterials functionalized by diazonium groups.

Ruoff does not teach carbon nanotubes nor a diazonium specie. Ruoff teaches **diazoalkanes** (col. 8, line 60) which are a completely different functional group as shown in the exemplary Lewis structures below:



Note that the diazo compound is a neutral compound (having nucleophilic character at the benzylic carbon in this example) whereas a diazonium specie is part of a salt where X⁻ represents a counter anion (having electrophilic character at the analogous benzylic carbon). Thus, the reactivity of these two functional groups is completely different.

Regarding rejections under 35 U.S.C. § 103(a), to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. *See* M.P.E.P. § 706.02(j); *see also In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991).

Applicant submits that Ruoff does not teach any of the claim limitations, neither nanotubes nor a diazonium specie and has thus not met the burden of establishing a *prima facie* case of obviousness.

Conclusion

No new matter has been added. Applicant respectfully submits that Claims 36-68, 88-93, and 130 as they now stand are patentably distinct over the art cited.

With the addition of no new claims, no additional filing fees are due. If additional fees are due and are not included, the Director is hereby authorized to charge any fees or credit any overpayment to Deposit Account Number 23-2426 of WINSTEAD PC P.C. (referencing matter 11321-P022WUD1).

If the Examiner has any questions or comments concerning this paper or the present application in general, the Examiner is invited to call the undersigned at 713-650-2780.

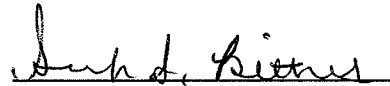
Respectfully submitted,

WINSTEAD PC

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